

AMENDMENTS TO THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by strikethrough and underlining. This listing also reflects any cancellation and/or addition of claims.

1. (original) A device comprising:

a light source;

at least one objective lens proximate the light source;

a unitary member proximate the light source having an outer portion and an inner portion, the inner portion connected to the outer portion, the inner portion having a deformable surface; and

at least one actuator that is configured to: (1) deform at least a portion of the deformable surface into a curved sectional surface; and (2) move the inner portion relative to the outer portion upon energization of the at least one actuator.

2. (original) A device comprising:

a light source;

at least one objective lens proximate the light source;

a unitary member proximate the light source having an outer portion and an inner portion, the inner portion connected to the outer portion, the outer portion having a maximum cross-sectional area of less than about 9 squared millimeters, the inner portion having a deformable surface; and

at least one actuator that is configured to: (1) deform at least a portion of the deformable surface into a curved sectional surface; and (2) move the inner portion relative to the outer portion upon energization of the at least one actuator.

3.-13. (canceled)

14. (currently amended) The device in any one of claims 1 and 2, wherein the unitary member comprises a support portion connected to ~~[[the]]~~a reflective portion of the deformable surface at first and second locations on the support portion that define a tilting axis extending between the first and second locations, the reflective portion having at least a first actuator coupled to the reflective portion to rotate the reflective portion about the tilting axis when at least the first actuator is energized, the reflective portion including at least a second actuator coupled to a surface of the reflective portion to deform the surface towards the light source when at least the second actuator is energized.

15. (original) The device of claim 14, wherein the unitary member comprises at least a third actuator coupled to the reflective portion to rotate the reflective portion relative to the support portion about a tipping axis extending between third and fourth locations when at least the third actuator is energized.

16.-22. (canceled)

23. (currently amended) The device in any one of claims ~~[[1-8]]~~1 and 2, wherein the light source comprises a high-intensity light coupled to an optical fiber extending along ~~[[the]]~~a longitudinal axis ~~[[in]]~~of ~~[[the]]~~a housing to transmit at least one light beam bi-directionally

along the length of the optical fiber, wherein the housing has first and second ends, and the objective lens is disposed proximate the second end.

24. (original) The device of claim 23, wherein the optical fiber comprises a single-mode optical fiber that transmits the light beam having a wavelength of about 500 nanometers.

25. (currently amended) The device of claim 23, wherein the optical fiber comprises a single-mode optical fiber extending generally parallel to and offset ~~[[to]]~~from the longitudinal axis.

26. (currently amended) The device in any one of claims ~~1-3, 5, 6, and 8~~1 and 2, wherein the objective lens comprises at least one diffractive optical element and at least one refractive optical element.

27. (original) The device in any one of claims 1 and 2, wherein the at least one actuator comprises at least one actuator configured to rotate the inner portion relative to the outer portion upon energization of the at least one actuator.

28.-40. (canceled)

41. (currently amended) The device ~~[[in]]~~of ~~any one of claims 2, 3, 5, and 6~~claim 23, wherein the at least one objective lens comprises a diffractive lens, the diffractive lens including a reflective portion that directs the light beam from the light source towards the first end of the housing.

42. (currently amended) The device ~~in any one of claims 1-4~~of claim 23, wherein the housing is disposed in an environment to obtain an image from the environment, the

environment selected from a group comprising one of a biofilm in porous media; nuclear storage facilities; internally in the human body; and externally on the surface of the human body.

43. (currently amended) A dynamic ~~lens~~arrangement comprising:

a unitary member having an outer portion and an inner portion, the inner portion connected to the outer portion, the inner portion having a deformable surface;

at least one actuator that: (1) deforms at least a portion of the deformable surface into a curved sectional surface; and (2) moves the inner portion relative to the outer portion upon energization of the at least the one actuator.

44. (currently amended) The dynamic ~~lens~~arrangement of claim 43, wherein the maximum cross-sectional area of the unitary member is less than 3 millimeters squared.

45. (currently amended) A dynamic ~~lens~~arrangement comprising:

an outer portion;

an optical inner portion connected to the outer portion, the optical inner portion having a base portion and deformable portion spaced apart along an axis, the base portion including a first base surface spaced apart from a second base surface with a first wall portion connecting the first and second base surfaces, the wall portion being disposed about the axis to define a first aperture, the deformable portion including a first surface spaced apart from a second surface along the axis with a second wall portion connecting the first and second surfaces, the second wall portion being disposed around the axis to define a second aperture generally aligned with the first aperture; and

at least one actuator contiguous to the first surface of the deformable portion so that energization of the at least ~~the~~ one actuator deforms the first surface into a curved solid sectional surface.

46. (currently amended) The dynamic ~~lens~~arrangement of claim 45, wherein the outer portion comprises a first annular member surrounding the inner portion, the first annular member having first diametrically disposed beam members connecting the first annular member to the inner portion to permit rotation of the inner ~~member~~portion about a tilting axis generally orthogonal to the axis.

47. (currently amended) The dynamic ~~lens~~arrangement of claim ~~[[45]]~~46, wherein the outer portion comprises a second annular member surrounding the first annular member, the second annular member having second diametrically disposed beam members connecting the second annular member to the first annular member to permit rotation of the first annular member about a tipping axis generally orthogonal to the tilting axis.

48. (currently amended) The dynamic ~~lens~~arrangement of claim ~~[[45]]~~46, further comprising at least another actuator coupled to the inner portion to rotate the inner portion about one of the tilting and tipping axes when at least the another actuator is energized.

49. (currently amended) The dynamic ~~lens~~arrangement of claim 45, wherein the first surface comprises a reflective surface.

50.-65. (canceled)